

## CLAIMS

What is claimed is:

1. A method for customizing business rules of a business logic application, comprising:

5                   serving a content page to a client browser of a client by a server, the content page allowing for entering and modifying of data relating to a business logic rule;

                  generating data by the server according to a predefined format from information received via the content page; and

                  automatically committing the generated data in the predefined format into a  
10   database, the database storing data including data relating to business logic rules for implementing business logic as entries in the database, the generated data being committed into a corresponding entry in the database;

                  wherein upon said committing, the committed database business rule entry is ready for execution by the business logic application.

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2. The method for customizing business rules of a business logic application of claim 1, wherein the entering of data includes selectively enabling and disabling the business logic rule via the content page provided by the server.

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3. The method for customizing business rules of a business logic application of claim 1, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

4. The method for customizing business rules of a business logic application of claim 1, further comprising, prior to said committing, automatically verifying the entry corresponding to the business logic rule in the predefined format using DTDs (Document Type Definitions).

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5. The method for customizing business rules of a business logic application of claim 1, wherein said committing the entered data according to the predefined format includes committing the entered data according to a predefined XML format.

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6. The method for customizing business rules of a business logic application of claim 5, further comprising, prior to said committing, automatically verifying the entry corresponding to the business logic rule in the predefined XML format using DTDs (Document Type Definitions).

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7. The method for customizing business rules of a business logic application of claim 1, wherein said serving the content page to the client browser includes serving an expression builder content page for entering and modifying of the data relating to the business logic rule expressed as an expression having symbols to be resolved when an instance of the business rule is one of created and executed by the business logic application.

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8. The method for customizing business rules of a business logic application of claim 7, wherein data for each business rule includes schedule data, the schedule data selectively includes schedule expressed as an expression via the expression builder content page.

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9. The method for customizing business rules of a business logic application of claim 7, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder content page.

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10. The method for customizing business rules of a business logic application of claim 7, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder content page.

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11. The method for customizing business rules of a business logic application of claim 1, wherein said serving the content page to the client browser includes serving a business rules management content page for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

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12. A computer program product for customizing business rules of a business logic application, comprising:

computer code that serves a content page to a client browser of a client, the content page allowing for entering and modifying of data relating to a business logic rule;

5 computer code that generates data according to a predefined format from information received via the content page;

computer code that automatically commits the generated data in the predefined format into a database that stores data including data relating to business logic rules for implementing business logic as entries in the database, the computer code  
10 commits the generated data into a corresponding entry in the database such that the committed database business rule entry is ready for execution by the business logic application; and

a computer readable medium that stores said computer codes.

15 13. The computer program product for customizing business rules of a business logic application of claim 12, wherein computer code that serves the content page also allows selectively enabling and disabling the business logic rule via the content page.

14. The computer program product for customizing business rules of a business  
20 logic application of claim 12, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

15. The computer program product for customizing business rules of a business logic application of claim 12, further comprising computer code that automatically verifies the entry corresponding to the business logic rule in the predefined format using DTDs (Document Type Definitions).

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16. The computer program product for customizing business rules of a business logic application of claim 12, wherein computer code that commits the entered data according to the predefined format includes computer code that commits the entered data according to a predefined XML format.

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17. The computer program product for customizing business rules of a business logic application of claim 16, further comprising computer code that automatically verifies the entry corresponding to the business logic rule in the predefined XML format using DTDs (Document Type Definitions).

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18. The computer program product for customizing business rules of a business logic application of claim 12, wherein the computer code that serves the content page includes computer code that serves an expression builder content page for entering and modifying of the data relating to the business logic rule expressed as an expression having symbols to be resolved when an instance of the business rule is one of created and executed by the business logic application.

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19. The computer program product for customizing business rules of a business logic application of claim 18, wherein data for each business rule includes schedule data, the schedule data selectively includes schedule expressed as an expression via the expression builder content page.

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20. The computer program product for customizing business rules of a business logic application of claim 18, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder content page.

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21. The computer program product for customizing business rules of a business logic application of claim 18, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder content page.

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22. The computer program product for customizing business rules of a business logic application of claim 12, wherein the computer code that serves the content page to the client browser includes computer code that serves a business rules management content page for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

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23. A business logic application system adapted for customizing business rules, comprising:

a client having a client browser;

a database for storing data including data relating to business logic rules for  
5 implementing business logic as entries in the database; and

a server having a web server adapted to serve at least one content page to  
the client browser for entering and modifying of the data of a business logic rule  
corresponding to an entry in the database,

wherein said server is adapted to automatically commit an entry  
10 corresponding to the business logic rule into the database according to a predefined  
format after modifications via the content page at said client browser and wherein the  
committed database business rule entry is ready for execution upon commitment by said  
server.

24. The business logic application system of claim 23, wherein each business  
15 logic rule can be selectively enabled via the content page provided by the server at the  
client browser.

25. The business logic application system of claim 23, wherein data for each  
20 business rule includes general information data, condition data, action data, and schedule  
data.

26. The business logic application system of claim 23, wherein said server is adapted to verify the entry corresponding to the business logic rule in the predefined format using DTDs (Document Type Definitions).

5 27. The business logic application system of claim 23, wherein the predefined format for committing the entry corresponding to the business logic rule into the database is a predefined XML format.

10 28. The business logic application system of claim 27, wherein said server is adapted to verify the entry corresponding to the business logic rule in the predefined XML format using DTDs (Document Type Definitions).

15 29. The business logic application system of claim 23, wherein said server is further adapted to serve an expression builder content page to the client browser for entering and modifying of the data of the business logic rule expressed as an expression having symbols to be resolved when an instance of the business rule is one of created and executed.

20 30. The business logic application system of claim 29, wherein data for each business rule includes schedule data, the schedule data selectively includes a schedule expressed as an expression via the expression builder content page.



31. The business logic application system of claim 29, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder content page.

5           32. The business logic application system of claim 29, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder content page.

10           33. The business logic application system of claim 23, wherein said server is further adapted to serve a business rules management content page to the client browser for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

34. An application/web server for implementing a business logic application system adapted for customizing business rules, comprising:

a web server in communication with a client browser of a client and adapted to serve at least one non-programmatic interactive user page to the client browser for

5 obtaining data for a customized business logic rule; and

an application server in communication with a database containing data relating to business logic rules for implementing business logic as entries in the database, wherein the data obtained for the customized business logic rule corresponds to an entry in the database,

10 wherein the application server is adapted to dynamically and automatically commit the data as an entry corresponding to the customized business logic rule into the database in a predefined format after obtaining the data via the user page at said client browser and wherein the committed database business rule entry is ready for execution upon commitment by said application server.

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35. The application/web server for implementing a business logic application system of claim 34, wherein said application server is adapted to verify the entry corresponding to the customized business logic rule in the predefined format using DTDs (Document Type Definitions).

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36. The application/web server for implementing a business logic application system of claim 34, wherein the predefined format for committing the entry corresponding to the business logic rule into the database is a predefined XML format.

37. The application/web server for implementing a business logic application system of claim 36, wherein said application server is adapted to verify the entry corresponding to the business logic rule in the predefined XML format using DTDs (Document Type Definitions).

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38. The application/web server for implementing a business logic application system of claim 34, wherein each business logic rule in the database can be selectively enabled via the at least one non-programmatic interactive user page.

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39. The application/web server for implementing a business logic application system of claim 34, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

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40. The application/web server for implementing a business logic application system of claim 34, wherein the at least one non-programmatic interactive user page includes a business rules management page for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

41. The application/web server for implementing a business logic application system of claim 34, wherein the at least one non-programmatic interactive user page includes an expression builder page expressing data of the business logic rule as an expression having at least one symbol that is to be resolved when an instance of the business rule is one of created and executed.

42. The application/web server for implementing a business logic application system of claim 41, wherein data for each business rule includes schedule data, the schedule data selectively includes a schedule expressed as an expression via the expression builder page.

43. The application/web server for implementing a business logic application system of claim 41, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder page.

44. The application/web server for implementing a business logic application system of claim 41, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder page.

45. A method for processing business logic rules of a business process system, comprising:

writing an event job into a job queue for each occurrence of an event having at least one business rule based on occurrence thereof;

5                   creating a business rule instance for each business rule corresponding to the event job;

testing conditions of each business instance;

writing the business rule instance into the job queue corresponding to each business instance for which the conditions testing succeeds;

10                   deleting the event job from the job queue;

executing the business rule instance; and

deleting the business rule instance from the job queue.

46. The method for processing business logic rules of claim 45, further

15                   comprising scheduling the business rule instance, wherein said executing the business rule instance is according to said scheduling.

47. The method for processing business logic rules of claim 46, wherein said

20                   scheduling the business rule instance is selected from the group consisting of delaying job execution, rescheduling job execution, scheduling repeat executions, and suspending execution.

48. The method for processing business logic rules of claim 45, wherein said executing the business rule instance comprises:

testing conditions of the business rule instance;

if the instance conditions testing fails, deleting the business rule instance

5 from the job queue; and

if the instance conditions testing succeeds:

executing actions specified by the business rule instance, and

deleting the business rule instance from the job queue.

10 49. The method for processing business logic rules of claim 48, wherein said executing actions specified by the business rule instance comprises:

scheduling execution using an execution schedule as determined according to scheduling data of the business rule instance; and

15 executing actions specified by the business rule instance according to the execution schedule.

50. The method for processing business logic rules of claim 45, further comprising resolving embedded pre-queue symbols in expressions of the event job corresponding to the business rule.

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51. The method for processing business logic rules of claim 50, wherein said resolving embedded pre-queue symbols in expressions of the event job comprises:

parsing the expression hierarchically; and  
resolving the symbols in a recursive manner.

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52. The method for processing business logic rules of claim 45, further comprising resolving embedded post-queue symbols in expressions of the business rule instance.

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53. The method for processing business logic rules of claim 52, wherein said resolving embedded post-queue symbols in expressions of the business rule instance comprises:

parsing the expression hierarchically; and  
resolving the symbols in a recursive manner.

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54. The method for processing business logic rules of claim 45, further comprising:

monitoring for incoming notification events; and  
reporting the incoming notification events to the business process system.

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55. The method for processing business logic rules of claim 45, wherein said executing the business rule instance includes selectively transmitting an outgoing notification.

56. The method for processing business logic rules of claim 55, wherein the outgoing notification is selected from the group consisting of mail, pager notification, Telalert, and NT network message notifications.

5 57. A business logic application system for implementing business logic rules, comprising:

a job queue module for maintaining a job queue and processing jobs in the job queue; and

10 a notification module in communication with said job queue module for monitoring for incoming notification events and reporting the incoming notification events to the job queue module,

wherein said job queue module writes an event job corresponding to a business logic rule to the job queue upon receiving an incoming notification event that matches a triggering event of the business logic rule,

15 said job queue module tests conditions of the business logic rule corresponding to the event job, deletes the event job from the job queue, and, if conditions of the business logic rule are met, writes a business rule instance to the job queue, and

20 said job queue module processes the business rule instance and deletes the business rule instance from the job queue.



58. The business logic application system of claim 57, wherein the job queue module processes the business rule instance by scheduling the business rule instance and executing the business rule instance is according to the scheduling.

5 59. The business logic application system of claim 58, wherein the scheduling by the job queue module is selected from the group consisting of delaying job execution, rescheduling job execution, scheduling repeat executions, and suspending execution.

10 60. The business logic application system of claim 57, wherein the job queue module processes the business rule instance includes testing conditions of the business rule instance, executing actions specified by the business rule instance if the conditions testing succeeds, and deleting the business rule instance form the job queue.

15 61. The business logic application system of claim 60, wherein the job queue module executes actions specified by the business rule instance includes scheduling execution according to scheduling data of the business rule instance and executing actions specified by the business rule instance according to the execution scheduling.

20 62. The business logic application system of claim 57, wherein the job queue module resolves any embedded pre-queue symbols in expressions of the event job corresponding to the business rule.

63. The business logic application system of claim 62, wherein the job queue module resolves embedded pre-queue symbols by parsing the expression hierarchically and resolving the symbols in a recursive manner.

5 64. The business logic application system of claim 57, wherein the job queue resolves any embedded post-queue symbols in expressions of the business rule instance.

65. The business logic application system of claim 64, wherein the job queue module resolves embedded post-queue symbols by parsing the expression hierarchically  
10 and resolving the symbols in a recursive manner.

66. The business logic application system of claim 57, wherein the notification module monitors for incoming notification events and reports the incoming notification events to the job queue module.  
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67. The business logic application system of claim 57, wherein the job queue module processes the business rule instance by selectively transmitting an outgoing notification to the notification module.

20 68. The business logic application system of claim 67, wherein the notification module processes an outgoing notification task received from the job queue module by sending out a notification selected from the group consisting of mail, pager notification, Telalert and NT network message notifications.